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148p ISSUE

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SONUS FABER'S AWESOME AIDA**

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# Sonus faber Aida (£80,000)

We ask: does this new speaker sing even more sweetly than 2010's flagship The Sonus faber?  
 Review: **Keith Howard, Ken Kessler, John Bämford & Paul Miller** Lab: **Keith Howard**

If you assumed that late-2010's The Sonus faber [TSF] would stand in splendid isolation as the Italian speaker artisan's statement product for at least the next few years, reckon again. The new Sonus faber Aida may be roughly two-thirds of the price, overall a little smaller and not circumscribed to a limited production run, but no £80,000 loudspeaker can ever be considered just an addition to the range. Particularly when, as is manifestly the case, the Aida exudes all the sumptuous design allure typical of Sonus faber but which the rather bluff, utilitarian TSF so obviously lacked.

It's a tenet of reproduction that offspring differ from their parents, despite fishing in the same gene pool. So it is with the Aida: it draws on many of the technologies developed for TSF but melds and dresses them differently.

## SIZE MATTERS

Let's start with the raw dimensions: it can be hard to gauge a large speaker's bulk just from photos. It stands 1725mm tall, 482mm wide and 780mm deep including the gentle lean-back of the enclosure, which is incorporated to help time alignment of the midrange driver and tweeter. Weight is a formidable 165kg each.

In horizontal cross-section the cabinet is shaped like a truncated teardrop, with spaced curved wooden cheeks either side that go a long way to making the Aida look more in the Sonus faber tradition. To admit these, the side-firing subwoofer of TSF is abandoned in favour of a smaller

320mm driver mounted in the base of the cabinet, with its port behind. They both exhaust through the gap between the angled bottom panel, which slopes up towards the rear, and the CNC-machined aluminium base which carries the floor spikes. Neatly, the plates which engage with the spikes to protect uncarpeted floors are held in place by magnets, which eases the fitment issue when manhandling speakers of this size and weight.

Crossover from the subwoofer to the twin front-mounted 220mm bass drivers is at a low 55Hz, and these two drivers only operate over a passband of

about two octaves before handing on to the 180mm midrange driver, which in turn crosses over to the 29mm soft dome tweeter at 3kHz.

Diaphragm materials echo those used in TSF but this time all the drivers bar the subwoofer (SB Acoustics) and rear-firing midrange unit (from SEAS) are Sonus faber designs manufactured by Scanspeak. The subwoofer driver has a sandwich cone with a honeycomb core and woven nano-carbon composite skins. A 75mm voice-coil diameter provides high power handling allied to a long-throw motor assembly that ensures low distortion. The level of subwoofer output is adjustable to suit the room, via a rotary control on the rear panel. A sandwich cone

**RIGHT:** Lyre-shaped in cross-section, the curvaceous cabinet embodies seven drivers in total. Side pieces – 'wings' – of multi-layered okume hardwood are available with red violin [on cover] or natural walnut finish



## BACK WHERE THEY BELONG

While all 30 or so pairs of the limited edition 'The Sonus faber' were quickly snapped up, some found it to be too much of a departure from the signature look of this revered Italian house. With Aida, the company wisely reverted to the more curvaceous lines expected of the brand. With Aida, Sonus faber has again devised a new shape that will have its rivals crying onto their graphics tablets. It possesses the 'lute' cross-section that made the Guarneri and its offspring so noteworthy, but the new look encases the core speaker in a wooden wrap to add depth and detail. It is a *tour de force*, and I for one can't wait to see a version in the 'blonde' wood used for the recent Anniversary models, as well as any smaller versions Aida might spawn. Sonus faber has done it again. *KK*

also features in the twin bass drivers but here the core is of syntactic foam (a hi-tech polymer containing tiny hollow spheres called microballoons) and the skins of cellulose pulp, *i.e.*, paper with an applied damping layer. Voice-coil diameter is 2in and the motor system incorporates copper shorting rings to suppress eddy current effects and enhance driver linearity.

Paper is also used for the midrange cone but mixed with kapok, kenaf (similar to jute but from a different genus of plant) and other natural fibres, and without a sandwich structure. Again a viscoelastic doping is applied to control breakup resonances. The basket structure is unique, being machined entirely from solid and combining Avional (a high strength aluminium alloy of the 2000 series containing copper, silicon and magnesium) and gunmetal alloy to create a non-resonant structure.

The motor uses CCAW (copper clad aluminium wire) to reduce moving mass in combination with a composite former and also features linearising shorting rings. The mid unit and tweeter are mounted together on a compliantly isolated sub-baffle to decouple them from the remainder of the cabinet.

Unlike in TSF, the tweeter is placed above the midrange unit rather than below and is not a ring type but a new Damped Apex Dome design that melds conventional dome and ring topologies. The motor system uses a neodymium

magnet, and rear radiation is dissipated in an acoustic labyrinth rear chamber, CNC machined from maple. Adjustment of tweeter level is provided to allow an optimum tonal balance to be achieved in rooms with differing amounts of soft furnishing.

### SHAPING THE SOUND FIELD

Another aspect of the Aida's configurability is the Sound Field Shaper, carried over from TSF but with a difference. Whereas formerly it comprised a small reflex-loaded two-way speaker cabinet recessed into the back panel and rotatable by 45° each way horizontally, in the Aida the two rear-firing drivers are incorporated into the main cabinet and, while their output level can still be controlled, their orientation is now fixed. The midrange unit fires straight backwards while the tweeter – which is now recessed to control its directivity – fires at about 30° to one side. The two cabinets are handed so that the tweeters are directed symmetrically – the recommendation being that they be pointed towards the centre of the soundstage, although users are encouraged to experiment here.

Speaking of the cabinets, they incorporate a plethora of technologies intended to reduce 'cabinet talk' to an insignificant minimum. The curvaceous shape of the side panels is a good start, and the compliant isolation of the midrange driver helps further. Bracing ribs within stiffen the structure and a clamshell construction is used in which aluminium 'dampshelves' at the top and bottom of the enclosure are bolted together. Twin multiple tuned mass dampers within the



# LOUDSPEAKER

## ENHANCING AMBIENCE

**Sound Field Shaping** – Sonus faber's attempt to optimise a speaker's interaction with the listening room – was introduced on The Sonus faber and is carried over to the Aida, albeit with revisions described in the main text. For decades loudspeaker designers and audiophiles have debated what the optimal distribution of a speaker's sound output should be. At one extreme are those who believe the interaction should be minimal and so prefer directional loudspeakers and copious application of sound absorbents within the room; at the other, those who prefer omnidirectional speakers, or approximations thereof, which spray their output as widely as possible. By adding output-adjustable rear-facing drivers to the Aida Sonus faber doesn't cover the full gamut of possibilities but it does offer a range of compromises. With the rear drivers switched off, the Aida is a conventional design in which omnidirectional radiation at the lowest frequencies gives way to much more directional output in the extreme treble. With the Sound Field Shaping drivers energised, the transition is less marked. *KH*

cabinet act to suppress the remaining vibrations, and a new 'bow spring' suspension isolates the cabinet from the floor. All told, there are few loudspeaker designs that are taken to such lengths to ensure that the only things vibrating are the driver diaphragms themselves.

### KEN KESSLER LISTENS

A preview at CES did little to prepare me for what I heard from Aida in an ideal listening room, with a commensurately 'high-end' analogue source from Continuum and electronics from darTZeel. As much as its illustrious predecessor dazzled me, this floorstander, at £40,000 less, made an even greater impression.

That is not to say The Sonus faber is any less of a speaker – for some, its commanding, even overwhelming presence might cause them to find the extra £40k, should they wrest a pair from a lucky owner. Aida is subtler, gentler, less aggressive, yet no less detailed. Its bass, while not as Gargantuan as The Sonus faber's, better suits the Kessler palate, my library a thrash- and hip-hop-free zone.

With Bonnie Raitt's finest LP, *The Glow*, the percussion opening alone on 'Standing By The Same Old Love' was enough to make me realise that I was experiencing one of those speakers that comes along maybe once every five years. It married in perfect proportions the impact and the feel of real drums, while the bass and guitar enjoyed in-the-room presence. Raitt's voice was rich and expressive, each nuance captured with utter authenticity.

A shimmer emerged from an original pressing of Roy Orbison's 'Crying' – plenty of air, the background vocals hovering

**RIGHT:** Rear-mounted midrange driver and tweeter form the Sound Field Shaper system. Rotary controls allow adjustment of subwoofer level, tweeter level and SFS output level

above and behind. Sam & Dave's 'Broke Down Piece Of Man' enjoyed a crystal clarity that made the impact of the keyboards match the rock-hard drumming for impact – they punctuated every beat. Via Aida, this was, well, operatic.

Then came the *coup de grâce*: Willy DeVille's 'Assassin of Love'. Oh... My... God. 3D everywhere, vocal textures bordering on the real. Then the Judds harmonising like a Missoni weave. Signor Guiseppe Verdi, your masterwork's name has not been used in vain.

### JOHN BAMFORD LISTENS

More than a year has passed since we were privileged to audition The Sonus fabers, yet the experience still haunts my memory. Their effortless delivery of lifelike scale

and thrilling musical dynamics proved enough to quicken the pulse of even this most seasoned audiophile – I was blown away! So how do these more living-room friendly Aidas compare with


their intimidating forebears?

Without hearing the two models side by side it's difficult to claim categorically that these new Aidas sound better integrated. As is the case with any very large loudspeaker, its interaction with the listening room is a critical factor. Nevertheless, while our audio memories are notoriously unreliable, I'm prepared to state that the Aidas *do* sound 'more of a piece'. Yes, they display similar positive traits: lushness, creamy tonality, 'sweet'

*'A massive sound burst from the Aidas with a creamy intensity'*

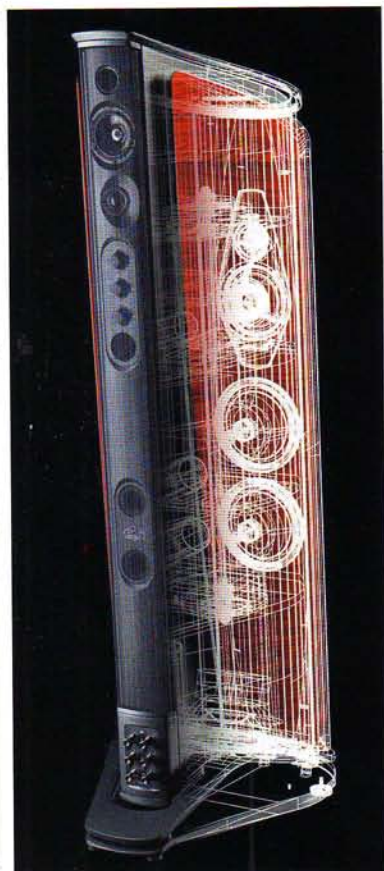


high frequencies that didn't grate even when we played a dynamically squashed recording of Canadian rockers Rush at full throttle, and an ability to resolve both texture and detail in recordings with glorious alacrity.

Speakers that are capable of delivering seismic low frequencies can often sound subjectively slow and lazy. The Aidas' ability to deliver lifelike scale and rumbling bass while remaining nimble and agile is most impressive. Patricia Barber's 'Bye Bye Blackbird' from her *Nightclub* album [Blue Note/Premonition Records 90763] sounded deliciously real – the piano was 

## LOUDSPEAKER

### SONUS FABER AIDA (£80k)



**LEFT:** The Aida builds on the novel construction methods premiered in The Sonus faber. Dual multiple tuned mass dampers within the cabinet act to cancel out residual vibrations

with the sweet percussive impact of piano and string bass floating above; her voice dripping sensuality, the ensemble filling the room with its huge presence. Another exceptional recording with piano, *Goldberg Variations Acoustica* [AIX 86060, 24-bit/96kHz], burst from the Aidas with a creamy intensity, a massive sound overwhelming only in its musical passion, never in raw SPL. As if to demonstrate that a rich, lush soundscape can co-exist with a sound that has bite, attack and transient edge we turned to 'Acoustic Traveller' [Nitty Gritty, AIX 80008] and the vivid clarity, the crack of fretwork, a delicious accompaniment to the vocal harmonies that suffuse this folksy album (also available in 5.1).

These speakers are all about the musical performance, their sound big, their reach – especially through bass – truly awesome. Moreover, the music escapes the bounds of their cabinets with no obvious 'shadow' or boxy presence, these beautifully crafted enclosures slipping from the aural view.

Smoma's vocal presence through 'Ain't No Sunshine' was vivid, the diction exceptional, but it was the sense of communication that left the lasting impact. On a fundamental level, these speakers *sing* to you – more 'Sonus faber' than *The Sonus faber*, they are at the pinnacle of the speaker builder's art. ☺

'there' – and the push of air from the bass loaded up the room at low frequencies in exquisite fashion.

Be in no doubt, these are truly fabulous loudspeakers. I admit I'm jealous of any audiophile with deep enough pockets to afford them and a listening room of adequate proportions to do them full justice.

#### PAUL MILLER LISTENS

As we listened through a gamut of '70s rock to the latest 'commercial' pop, including Adele's *21*, the Aidas delivered – unfailingly – the most luxuriously appointed music, rich in detail and lush in warmth and scope but never sickly sweet. Every note, every inflection tells you these are archetypal 'Sonus fabers', the contrast with the brand's imposing namesakes, reviewed a year ago [HFN Feb '11], the subject of intrigued discussion among our listening panel.

Bass is exceptionally deep and so smoothly extended that you could envisage the most obnoxious of room modes being avoided. The 'whoomph' of bass from 'Bye Bye Blackbird' was palpable even at modest volume, a groundswell

#### HI-FI NEWS VERDICT

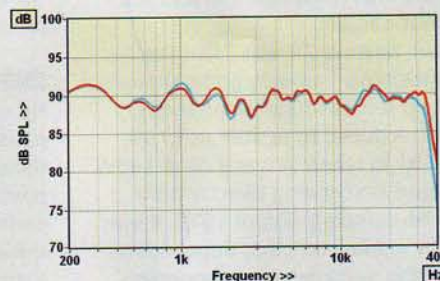
Big speakers are not uncommon but *great* big speakers are a somewhat rarer breed. Nevertheless, to hear one is to know one, and it takes no time indeed to appreciate the Aida as most certainly in this exalted category. Its flowing lines disguise its prodigious dimensions just as its beautiful cabinetry ensures the Aida – unlike the dominating Sonus faber – would grace any fine living and listening space.

Sound Quality: 90%

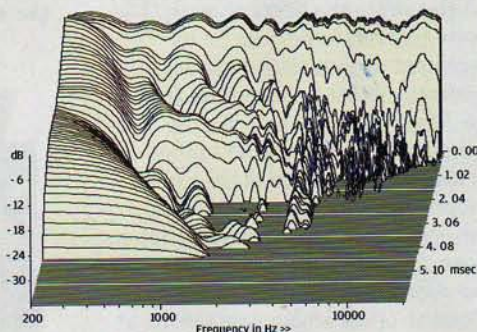


Sonus faber claims an impressive 92dB sensitivity for the Aida but our measurements suggest that 90dB would be nearer the mark, the pink noise figure being 89.6dB. The fact that all three sensitivity figures – mean, pink noise and music-weighted – are so close indicates an essentially flat frequency response, confirmed by the response error figures of  $\pm 2.2$ dB and  $\pm 2.3$ dB respectively for the review pair, 200Hz to 20kHz [Graph 1, below]. This shows the responses measured on an axis a little below the tweeter height, which is about optimal. On the axis of the midrange driver there is a significant suckout around crossover to the tweeter, so it pays to sit higher than normal, particularly at short listening distances. At the right height, as shown in the graph, the response trend is essentially flat. For such a complex speaker, pair matching of  $\pm 1.1$ dB, also over the range 200Hz to 20kHz, is a good result.

Sonus faber quotes a nominal 4ohm impedance which is borne out by the 3.3ohm minimum modulus. Impedance phase angles are modest, so the minimum EPDR (equivalent peak dissipation resistance) is relatively high at 2.1ohm at 123Hz – a figure that should give no pause to any amplifier likely to be used with the Aida. It's notable in the impedance modulus data that the usual bass peaks have been eliminated, which certainly contributes to the undemanding load. Although the diffraction-corrected near-field bass extension may seem a little disappointing at 40Hz (-6dB re. 200Hz), the roll-off is very gentle, the response being only about 13dB down at 20Hz. The CSD waterfall [Graph 2, below] is pretty clean but for some low-level breakup modes beginning around 4kHz. KH



ABOVE: Measured on an axis above the mid driver, the Aida's forward response is impressively flat



ABOVE: Cabinet resonances are well controlled. There is just a hint of midrange cone breakup at 4kHz

#### HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms – Mean/IEC/Music)	89.5dB/89.6dB/89.5dB
Impedance modulus min/max (20Hz–20kHz)	3.3ohm @ 96Hz 11.1ohm @ 2.1kHz
Impedance phase min/max (20Hz–20kHz)	-31° @ 2.9kHz 26° @ 153Hz
Pair matching (200Hz–20kHz)	$\pm 1.1$ dB
LF/HF extension (-6dB ref 200Hz/10kHz)	40Hz / 39.5kHz/37.1kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.3% / 0.4% / <0.1%
Dimensions (HWD)	1725x482x780mm